

SEQUENCE LISTING

<110> KUFER, PETER
 LENKKERI-SCHUTZ, ULLA
 LUTTERBUSE, RALF
 KOHLEISEN, BIRGIT

<120> LESS IMMUNOGENIC BINDING MOLECULES

<130> 028622-0155

<140> 10/588,734

<141> 2006-08-08

<150> PCT/EP05/001573

<151> 2005-02-16

<150> EP 04003445.6

<151> 2004-02-16

<160> 40

<170> PatentIn version 3.3

<210> 1

<211> 318

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 OKT3 light chain

<400> 1

gacatccaga	tgacccagtc	tccatcctcc	ctgtctgcat	ctgtaggaga	cagagtcacc	60
atcacttgca	gtgcaagttc	aagcgtaagc	tacatgaatt	ggtatcagca	gacaccaggg	120
aaagccccta	agagatggat	ctatgacaca	tccaaattgg	cttctggggg	cccatcaagg	180
ttcagtgga	gtggatctgg	gacagattac	actttcacca	tcagcagtct	gcaacctgaa	240
gatattgcaa	cttactactg	tcaacagtgg	agtagtaacc	cttttacttt	tggccagggg	300
accaagctgc	agatcacc					318

<210> 2

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 OKT3 VL

<400> 2

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10					15		

Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met
			20					25					30		

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
 35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
 50 55 60

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
 65 70 75 80

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr
 85 90 95

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
 100 105

<210> 3
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 3
 agagcaagtt caagcgtaag ctacatgaat

30

<210> 4
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 4
 Arg Ala Ser Ser Ser Val Ser Tyr Met Asn
 1 5 10

<210> 5
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 5
gacacatcca aagtggcttc t

21

<210> 6
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 6
Asp Thr Ser Lys Val Ala Ser
1 5

<210> 7
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 7
caacagtggg gtagtaaccc tctcact

27

<210> 8
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 8
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 9
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
CD3 VL

<400> 9
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgca gagcaagttc aagcgtaagc tacatgaatt ggtatcagca gacaccaggg 120
aaagccccta agagatggat ctatgacaca tccaaagtgg cttctgggggt cccatcaagg 180

ttcagtggca	gtggatctgg	gacagattac	actttcacca	tcagcagtct	gcaacctgaa	240
gatattgcaa	cttactactg	tcaacagtgg	agtagtaacc	ctctcacttt	tggccagggg	300
accaagctgc	agatcacc					318

<210> 10
 <211> 106
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CD3 VL

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10						15	

Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met
			20					25					30		

Asn	Trp	Tyr	Gln	Gln	Thr	Pro	Gly	Lys	Ala	Pro	Lys	Arg	Trp	Ile	Tyr
		35					40					45			

Asp	Thr	Ser	Lys	Val	Ala	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser
	50					55					60				

Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu
65					70					75					80

Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Trp	Ser	Ser	Asn	Pro	Leu	Thr
				85					90					95	

Phe	Gly	Gln	Gly	Thr	Lys	Leu	Gln	Ile	Thr
			100					105	

<210> 11
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CD3 VH

caggtgcagc	tggtgcagtc	tgggggaggc	gtgggtccagc	ctgggagggtc	cctgagactc	60
tcctgtaagt	cttctggata	caccttcact	aggtatacga	tgcactgggt	ccgccaggct	120
ccaggggaagg	ggctggagtg	gattggatac	ataaatccta	gccgtgggta	tactaattat	180
aatcagaagg	tgaaggaccg	attcaccatc	tccagagaca	actccaagaa	cacggccttt	240
ctgcaaattg	acagcctgag	acccgaggac	acgggtgtgt	atttctgtgc	gagatattat	300

gatgatcatt actgccttga ctactggggc cagggcaccc cggtcaccgt ctectca

357

<210> 12

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD3 VH

<400> 12

Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Lys Ser Ser Gly Tyr Thr Phe Thr Arg Tyr
20 25 30

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
50 55 60

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe
65 70 75 80

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Pro Val Thr Val Ser Ser
115

<210> 13

<211> 729

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD3 VH-VL

<400> 13

caggtgcagc tgggtgcagtc tgggggagggc gtggtccagc ctgggagggtc cctgagactc 60
tcctgtaagt cttctggata caccttcact aggtatacga tgcactgggt ccgccaggct 120
ccagggaagg ggctggagtg gattggatac ataaatccta gccgtgggta tactaattat 180

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aatcagaagg tgaaggaccg attcaccatc tccagagaca actccaagaa cacggccttt 240
ctgcaaatgg acagcctgag acccgaggac acgggtgtgt atttctgtgc gagatattat 300
gatgatcatt actgccttga ctattggggc cagggcaccg cggtcaccgt ctcctcagtc 360
gaaggtggaa gtggagggtc tgggtggaagt ggagggtcag gtggagtgga cgacatccag 420
atgacccagt ctccatcctc cctgtctgca tctgtaggag acagagtcac catcacttgc 480
agagcaagtt caagcgtaag ctacatgaat tggatatcagc agacaccagg gaaagcccct 540
aagagatgga tctatgacac atccaaagtg gcttctgggg tcccatcaag gttcagtggc 600
agtggatctg ggacagatta cactttcacc atcagcagtc tgcaacctga agatattgca 660
acttactact gtcaacagtg gagtagtaac cctctcactt ttggccaggg gaccaagctg 720
cagatcacc 729

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<210> 14
 <211> 243
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 CD3 VH-VL

<400> 14
 Gln Val Gln Leu Val Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Lys Ser Ser Gly Tyr Thr Phe Thr Arg Tyr
 20 25 30

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Val
 50 55 60

Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Ala Phe
 65 70 75 80

Leu Gln Met Asp Ser Leu Arg Pro Glu Asp Thr Gly Val Tyr Phe Cys
 85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Pro Val Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly
 115 120 125

Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Met Thr Gln Ser
 130 135 140

Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys
145 150 155 160

Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro
165 170 175

Gly Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser
180 185 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr
195 200 205

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
210 215 220

Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu
225 230 235 240

Gln Ile Thr

<210> 15
<211> 372
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
CD19 VH

<400> 15
caggtgcagc tgcagcagtc tggggctgag ctggtgaggc ctgggtcctc agtgaagatt 60
tcctgcaagg cttctggcta tgcattcagt agctactgga tgaactgggt gaagcagagg 120
cctggacagg gtcttgagtg gattggacag atttggcctg gagatgggtga tactaactac 180
aatggaaagt tcaagggtaa agccactctg actgcagacg aatcctccag cacagcctac 240
atgcaactca gcagcctagc atctgaggac tctgcggtct atttctgtgc aagacgggag 300
actacgacgg taggccgtta ttactatgct atggactact ggggcccaagg gaccacggtc 360
accgtctcct cc 372

<210> 16
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
CD19 VH

<400> 16

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ser
 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Tyr
 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Gly Gln Ile Trp Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Glu Ser Ser Ser Thr Ala Tyr
 65 70 75 80

Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95

Ala Arg Arg Glu Thr Thr Thr Val Gly Arg Tyr Tyr Tyr Ala Met Asp
 100 105 110

Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 17

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 CD19 VL

<400> 17

gatatccagc	tgaccagtc	tccagcttct	ttggctgtgt	ctctagggca	gagggccacc	60
atctcctgca	aggccagcca	aagtgttgat	tatgatgggtg	atagttattt	gaactggtac	120
caacagattc	caggacagcc	acccaaactc	ctcatctatg	atgcatccaa	tctagtttct	180
gggatcccac	ccaggttttag	tggcagtggtg	tctgggacag	acttcaccct	caacatccat	240
cctgtggaga	aggtggatgc	tgcaacctat	cactgtcagc	aaagtactga	ggatccgtgg	300
acgttcggtg	gagggaccaa	gctcgagatc	aaa			333

<210> 18

<211> 111

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
CD19 VL

<400> 18

Asp	Ile	Gln	Leu	Thr	Gln	Ser	Pro	Ala	Ser	Leu	Ala	Val	Ser	Leu	Gly
1				5					10					15	

Gln	Arg	Ala	Thr	Ile	Ser	Cys	Lys	Ala	Ser	Gln	Ser	Val	Asp	Tyr	Asp
			20					25					30		

Gly	Asp	Ser	Tyr	Leu	Asn	Trp	Tyr	Gln	Gln	Ile	Pro	Gly	Gln	Pro	Pro
		35					40					45			

Lys	Leu	Leu	Ile	Tyr	Asp	Ala	Ser	Asn	Leu	Val	Ser	Gly	Ile	Pro	Pro
	50					55					60				

Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Asn	Ile	His
65					70					75					80

Pro	Val	Glu	Lys	Val	Asp	Ala	Ala	Thr	Tyr	His	Cys	Gln	Gln	Ser	Thr
				85					90					95	

Glu	Asp	Pro	Trp	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys
			100					105					110	

<210> 19

<211> 1504

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 19

tgtacactcc	gatatccagc	tgacccagtc	tccagcttct	ttggctgtgt	ctctagggca	60
gagggccacc	atctcctgca	aggccagcca	aagtgttgat	tatgatgggtg	atagttattt	120
gaactggtac	caacagattc	caggacagcc	acccaaactc	ctcatctatg	atgcatccaa	180
tctagtttct	gggatcccac	ccaggttttag	tggcagtggg	tctgggacag	acttcaccct	240
caacatccat	cctgtggaga	aggtggatgc	tgcaacctat	cactgtcagc	aaagtactga	300
ggatccgtgg	acgttcggtg	gagggaccaa	gctcgagatc	aaagggtgggtg	gtggttcttg	360
cggcggcggc	tccggtgggtg	gtggttctca	ggtgcagctg	cagcagtctg	gggctgagct	420
ggtgaggcct	gggtcctcag	tgaagatttc	ctgcaaggct	tctggctatg	cattcagtag	480
ctactggatg	aactgggtga	agcagaggcc	tggacagggt	cttgagtgga	ttggacagat	540
ttggcctgga	gatggtgata	ctaactacaa	tggaaagttc	aagggtaaag	ccactctgac	600
tgcagacgaa	tcctccagca	cagcctacat	gcaactcagc	agcctagcat	ctgaggactc	660
tgcggtctat	ttctgtgcaa	gacgggagac	tacgacggta	ggccgttatt	actatgctat	720
ggactactgg	ggccaaggga	ccacggtcac	cgtctcctcc	ggaggtgggtg	gctcccaggt	780
gcagctgggtg	cagtctgggg	gaggcgtgggt	ccagcctggg	aggctccctga	gactctcctg	840
taagtcttct	ggatacacct	tcactaggta	tacgatgcac	tgggtccgcc	aggctccagg	900

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gaaggggctg gagtggattg gatacataaa tcctagccgt gggtataacta attataaatca 960
gaaggtgaag gaccgattca ccatctccag agacaactcc aagaacacgg cctttctgca 1020
aatggacagc ctgagacccg aggacacggg tgtgtatttc tgtgcgagat attatgatga 1080
tcattactgc cttgactatt ggggccaggg caccgccggtc accgtctcct cagtcgaagg 1140
tggaagtgga ggttctgggtg gaagtggagg ttcagggtgga gtggacgaca tccagatgac 1200
ccagtctcca tcctccctgt ctgcatctgt aggagacaga gtcaccatca cttgcagagc 1260
aagttcaagc gtaagctaca tgaattggta tcagcagaca ccagggaaag cccctaagag 1320
atggatctat gacacatcca aagtggcttc tgggggtcca tcaaggttca gtggcagtg 1380
atctgggaca gattacactt tcaccatcag cagtctgcaa cctgaagata ttgcaactta 1440
ctactgtcaa cagtggagta gtaaccctct cacttttggc caggggacca agctgcagat 1500
cacc 1504

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<210> 20

<211> 498

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 20

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Asp Ile Gln Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
1           5           10           15

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Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser Val Asp Tyr Asp
          20           25           30

```

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Gly Asp Ser Tyr Leu Asn Trp Tyr Gln Gln Ile Pro Gly Gln Pro Pro
          35           40           45

```

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Lys Leu Leu Ile Tyr Asp Ala Ser Asn Leu Val Ser Gly Ile Pro Pro
          50           55           60

```

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Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
65           70           75           80

```

```

Pro Val Glu Lys Val Asp Ala Ala Thr Tyr His Cys Gln Gln Ser Thr
          85           90           95

```

```

Glu Asp Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly
          100          105          110

```

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Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val
          115          120          125

```

```

Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ser Ser Val
          130          135          140

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Lys 145	Ile	Ser	Cys	Lys	Ala 150	Ser	Gly	Tyr	Ala	Phe 155	Ser	Ser	Tyr	Trp	Met 160
Asn	Trp	Val	Lys	Gln 165	Arg	Pro	Gly	Gln	Gly 170	Leu	Glu	Trp	Ile	Gly 175	Gln
Ile	Trp	Pro	Gly 180	Asp	Gly	Asp	Thr	Asn 185	Tyr	Asn	Gly	Lys	Phe 190	Lys	Gly
Lys	Ala	Thr 195	Leu	Thr	Ala	Asp	Glu 200	Ser	Ser	Ser	Thr	Ala 205	Tyr	Met	Gln
Leu 210	Ser	Ser	Leu	Ala	Ser	Glu 215	Asp	Ser	Ala	Val	Tyr 220	Phe	Cys	Ala	Arg
Arg 225	Glu	Thr	Thr	Thr	Val 230	Gly	Arg	Tyr	Tyr	Tyr 235	Ala	Met	Asp	Tyr	Trp 240
Gly	Gln	Gly	Thr	Thr 245	Val	Thr	Val	Ser	Ser 250	Gly	Gly	Gly	Gly	Ser 255	Gln
Val	Gln	Leu	Val 260	Gln	Ser	Gly	Gly	Gly 265	Val	Val	Gln	Pro	Gly 270	Arg	Ser
Leu	Arg	Leu	Ser 275	Cys	Lys	Ser	Ser 280	Gly	Tyr	Thr	Phe	Thr 285	Arg	Tyr	Thr
Met 290	His	Trp	Val	Arg	Gln	Ala 295	Pro	Gly	Lys	Gly 300	Leu	Glu	Trp	Ile	Gly
Tyr 305	Ile	Asn	Pro	Ser	Arg 310	Gly	Tyr	Thr	Asn	Tyr 315	Asn	Gln	Lys	Val	Lys 320
Asp	Arg	Phe	Thr	Ile 325	Ser	Arg	Asp	Asn	Ser 330	Lys	Asn	Thr	Ala	Phe 335	Leu
Gln	Met	Asp	Ser 340	Leu	Arg	Pro	Glu	Asp 345	Thr	Gly	Val	Tyr	Phe 350	Cys	Ala
Arg	Tyr	Tyr 355	Asp	Asp	His	Tyr	Cys 360	Leu	Asp	Tyr	Trp	Gly 365	Gln	Gly	Thr

Pro Val Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly Gly
 370 375 380

Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Met Thr Gln Ser Pro
 385 390 395 400

Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg
 405 410 415

Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly
 420 425 430

Lys Ala Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly
 435 440 445

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe
 450 455 460

Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln
 465 470 475 480

Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu Gln
 485 490 495

Ile Thr

<210> 21
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 5-10 VH

<400> 21
 gaggtgcagc tgctcgagca gtctggagct gagctggtaa ggcctgggac ttcagtgaag 60
 atatcctgca aggcttctgg atacgccttc actaactact ggctagggtg ggtaaagcag 120
 aggcctggac atggacttga gtggattgga gatattttcc ctggaagtgg taatatccac 180
 tacaatgaga agttcaaggg caaagccaca ctgactgcag acaaatcttc gagcacagcc 240
 tatatgcagc tcagtagcct gacatttgag gactctgctg tctattttctg tgcaagactg 300
 aggaactggg acgagcctat ggactactgg ggccaaggga ccacggtcac cgtctcctcc 360

<210> 22
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
5-10 VH

<400> 22

Glu	Val	Gln	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Leu	Val	Arg	Pro	Gly
1				5				10					15		

Thr	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ala	Phe	Thr	Asn
			20					25					30		

Tyr	Trp	Leu	Gly	Trp	Val	Lys	Gln	Arg	Pro	Gly	His	Gly	Leu	Glu	Trp
		35				40						45			

Ile	Gly	Asp	Ile	Phe	Pro	Gly	Ser	Gly	Asn	Ile	His	Tyr	Asn	Glu	Lys
	50					55					60				

Phe	Lys	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala
65					70					75					80

Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	Phe	Glu	Asp	Ser	Ala	Val	Tyr	Phe
				85					90					95	

Cys	Ala	Arg	Leu	Arg	Asn	Trp	Asp	Glu	Pro	Met	Asp	Tyr	Trp	Gly	Gln
			100					105					110		

Gly	Thr	Thr	Val	Thr	Val	Ser	Ser
			115				120

<210> 23

<211> 339

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
5-10 VL

<400> 23

gagctcgtga	tgacacagtc	tccatcctcc	ctgactgtga	cagcaggaga	gaaggctcact	60
atgagctgca	agtccagtc	gagtcctgta	aacagtggaa	atcaaaagaa	ctacttgacc	120
tggtaccagc	agaaaccagg	gcagcctcct	aaactggtga	tctactgggc	atccactagg	180
gaatctgggg	tccctgatcg	cttcacaggc	agtggatctg	gaacagattt	cactctcacc	240
atcagcagtg	tgcaggctga	agacctggca	gtttattact	gtcagaatga	ttatagttat	300
ccgctcacgt	tcggtgctgg	gaccaagctt	gagatcaaa			339

<210> 24
 <211> 113
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 5-10 VL

<400> 24
 Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly
 1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
 20 25 30

Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn
 85 90 95

Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile
 100 105 110

Lys

<210> 25
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 3-1 VH

<400> 25
 gaggtgcagc tgctcgagca gtctggagct gagctggtga aacctggggc ctcagtgaag 60
 atatcctgca aggcttctgg atacgccttc actaactact ggctaggttg ggtaaagcag 120
 aggcttgac atggacttga gtggattgga gatcttttcc ctggaagtgg taatactcac 180
 tacaatgaga gggttcagggg caaagccaca ctgactgcag acaaatcctc gagcacagcc 240
 tttatgcagc tcagtagcct gacatctgag gactctgctg tctatttctg tgcaagattg 300
 aggaactggg acgaggctat ggactactgg ggccaaggga ccacgggtcac cgtctcctcc 360

<210> 26
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 3-1 VH

<400> 26
 Glu Val Gln Leu Leu Glu Gln Ser Gly Ala Glu Leu Val Lys Pro Gly
 1 5 10 15

Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn
 20 25 30

Tyr Trp Leu Gly Trp Val Lys Gln Arg Pro Gly His Gly Leu Glu Trp
 35 40 45

Ile Gly Asp Leu Phe Pro Gly Ser Gly Asn Thr His Tyr Asn Glu Arg
 50 55 60

Phe Arg Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
 65 70 75 80

Phe Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe
 85 90 95

Cys Ala Arg Leu Arg Asn Trp Asp Glu Ala Met Asp Tyr Trp Gly Gln
 100 105 110

Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 27
 <211> 321
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 3-1 VL

<400> 27
 gagctcgtca tgacccagtc tccatcttat cttgctgcat ctccctggaga aaccattact 60
 attaattgca gggcaagtaa gagcattagc aaatatattag cctgggtatca agagaaacct 120
 gggaaaacta ataagcttct tatctactct ggatccactt tgcaatctgg aattccatca 180
 aggttcagtg gcagtggatc tggtacagat ttcactctca ccatcagtag cctggagcct 240

gaagattttg caatgtatta ctgtcaacag cataatgaat atccgtacac gttcggaggg 300
 gggaccaagc ttgagatcaa a 321

<210> 28
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 3-1 VL

<400> 28
 Glu Leu Val Met Thr Gln Ser Pro Ser Tyr Leu Ala Ala Ser Pro Gly
 1 5 10 15

Glu Thr Ile Thr Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Tyr
 20 25 30

Leu Ala Trp Tyr Gln Glu Lys Pro Gly Lys Thr Asn Lys Leu Leu Ile
 35 40 45

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
 65 70 75 80

Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln His Asn Glu Tyr Pro Tyr
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 29
 <211> 372
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 4-7 VH

<400> 29
 gaggtgcagc tgctcgagca gtctggagct gagctggcga ggcctggggc ttcagtgaag 60
 ctgtcctgca aggttcttgg ctacaccttc acaaactatg gtttaagctg ggtgaagcag 120
 aggcctggac aggtccttga gtggattgga gaggtttatc ctagaatttg taatgcttac 180
 tacaatgaga agttcaaggg caaggccaca ctgactgcag acaaatcctc cagcacagcg 240
 tccatggagc tccgcagcct gacctctgag gactctgcgg tctatttctg tgcaagacgg 300
 ggatcctacg atactaacta cgactggtac ttcgatgtct ggggccaagg gaccacggtc 360

accgtctcct cc

372

<210> 30
 <211> 124
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 4-7 VH

<400> 30
 Glu Val Gln Leu Leu Glu Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly
 1 5 10 15

Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn
 20 25 30

Tyr Gly Leu Ser Trp Val Lys Gln Arg Pro Gly Gln Val Leu Glu Trp
 35 40 45

Ile Gly Glu Val Tyr Pro Arg Ile Gly Asn Ala Tyr Tyr Asn Glu Lys
 50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
 65 70 75 80

Ser Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe
 85 90 95

Cys Ala Arg Arg Gly Ser Tyr Asp Thr Asn Tyr Asp Trp Tyr Phe Asp
 100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 31
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 4-7 VL

<400> 31
 gagctcgtga tgacccagac tccactctcc ctgcctgtca gtcttggaga tcaagcctcc 60
 atctcttgca gatctagtca gaggcttgta cacagtaatg gaaacaccta tttacattgg 120
 tacctgcaga agccaggcca gtctccaaag ctctgatct acaaagtttc caaccgattt 180

tctgggggtcc	cagacagggtt	cagtggcagt	ggatcagggga	cagatttcac	actcaagatc	240
agcagagtgg	aggctgagga	tctgggagtt	tatttctgct	ctcaaagtac	acatgttccg	300
tacacgttcg	gagggggggac	caagcttgag	atcaaa			336

<210> 32
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 4-7 VL

<400> 32
 Glu Leu Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
 1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
 20 25 30

Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
 35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser
 85 90 95

Thr His Val Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 33
 <211> 1470
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 anti-CD3

gagctcgtca	tgaccagtc	tccatcttat	cttgctgcat	ctcctggaga	aaccattact	60
attaattgca	gggcaagtaa	gagcattagc	aaatatcttag	cctgggtatca	agagaaacct	120
gggaaaacta	ataagcttct	tatctactct	ggatccactt	tgcaatctgg	aattccatca	180
aggttcagtg	gcagtggatc	tggtacagat	ttcactctca	ccatcagtag	cctggagcct	240
gaagattttg	caatgtatta	ctgtcaacag	cataatgaat	atccgtacac	gttcggaggg	300

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gggaccaagc ttgagatcaa aggtggtggt ggttctggcg gcggcggctc cgggtggtggt 360
ggttctgagg tgcagctgct cgagcagtct ggagctgagc tggtgaaacc tggggcctca 420
gtgaagatat cctgcaaggc ttctggatac gccttcacta actactggct aggttgggta 480
aagcagaggc ctggacatgg acttgagtgg attggagatc ttttccttg aagtggtaat 540
actcactaca atgagaggtt caggggcaaa gccacactga ctgcagacaa atcctcgagc 600
acagccttta tgcagctcag tagcctgaca tctgaggact ctgctgtcta tttctgtgca 660
agattgagga actgggacga ggctatggac tactggggcc aagggaccac ggtcaccgct 720
tcctccggag gtggtggatc ccaggtgcag ctggtgcagt ctgggggagg cgtggtccag 780
cctgggaggt ccctgagact ctctgtgaag tcttctggat acaccttcac taggtatacg 840
atgcactggg tccgccaggc tccaggggaag gggctggagt ggattggata cataaatcct 900
agccgtggtt atactaatta taatcagaag gtgaaggacc gattcaccat ctccagagac 960
aactccaaga acacggcctt tctgcaaatt gacagcctga gacccgagga cacgggtgtg 1020
tatttctgtg cgagatatta tgatgatcat tactgccttg actattgggg ccagggcacc 1080
ccggtcaccg tctcctcagt cgaaggtgga agtggagggt ctggtggaag tggaggttca 1140
ggtggagtgg acgacatcca gatgaccag tctccatcct ccctgtctgc atctgtagga 1200
gacagagtca ccatcacttg cagagcaagt tcaagcgtaa gctacatgaa ttggtatcag 1260
cagacaccag ggaaagcccc taagagatgg atctatgaca catccaaagt ggcttctggg 1320
gtcccatcaa ggttcagtgg cagtggatct gggacagatt acactttcac catcagcagt 1380
ctgcaacctg aagatattgc aacttactac tgtcaacagt ggagtagtaa ccctctcact 1440
tttgccagg ggaccaagct gcagatcacc 1470

```

<210> 34

<211> 490

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 34

```

Glu Leu Val Met Thr Gln Ser Pro Ser Tyr Leu Ala Ala Ser Pro Gly
1           5           10          15

```

```

Glu Thr Ile Thr Ile Asn Cys Arg Ala Ser Lys Ser Ile Ser Lys Tyr
          20          25          30

```

```

Leu Ala Trp Tyr Gln Glu Lys Pro Gly Lys Thr Asn Lys Leu Leu Ile
          35          40          45

```

```

Tyr Ser Gly Ser Thr Leu Gln Ser Gly Ile Pro Ser Arg Phe Ser Gly
          50          55          60

```

```

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro
65          70          75          80

```

```

Glu Asp Phe Ala Met Tyr Tyr Cys Gln Gln His Asn Glu Tyr Pro Tyr
          85          90          95

```

```

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser
          100          105          110

```

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Leu Glu
115 120 125

Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile Ser
130 135 140

Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr Trp Leu Gly Trp Val
145 150 155 160

Lys Gln Arg Pro Gly His Gly Leu Glu Trp Ile Gly Asp Leu Phe Pro
165 170 175

Gly Ser Gly Asn Thr His Tyr Asn Glu Arg Phe Arg Gly Lys Ala Thr
180 185 190

Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Phe Met Gln Leu Ser Ser
195 200 205

Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg Leu Arg Asn
210 215 220

Trp Asp Glu Ala Met Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val
225 230 235 240

Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Gly
245 250 255

Gly Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ser Ser
260 265 270

Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Arg Gln Ala Pro
275 280 285

Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
290 295 300

Thr Asn Tyr Asn Gln Lys Val Lys Asp Arg Phe Thr Ile Ser Arg Asp
305 310 315 320

Asn Ser Lys Asn Thr Ala Phe Leu Gln Met Asp Ser Leu Arg Pro Glu
325 330 335

Asp Thr Gly Val Tyr Phe Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys
 340 345 350

Leu Asp Tyr Trp Gly Gln Gly Thr Pro Val Thr Val Ser Ser Val Glu
 355 360 365

Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Val Asp
 370 375 380

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 385 390 395 400

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met
 405 410 415

Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Arg Trp Ile Tyr
 420 425 430

Asp Thr Ser Lys Val Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
 435 440 445

Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu
 450 455 460

Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
 465 470 475 480

Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
 485 490

<210> 35

<211> 1498

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 anti-CD3

<400> 35

```
tgtacactcc gagctcgtga tgacacagtc tccatcctcc ctgactgtga cagcaggaga 60
gaaggtcact atgagctgca agtccagtca gagtctgtta aacagtggaa atcaaaagaa 120
ctacttgacc tggtagcagc agaaaccagg gcagcctcct aaactgttga tctactgggc 180
atccactagg gaatctgggg tccctgatcg cttcacaggc agtggatctg gaacagattt 240
cactctcacc atcagcagtg tgcaggctga agacctggca gtttattact gtcagaatga 300
ttatagttat ccgctcacgt tcggtgctgg gaccaagctt gagatcaaag gtggtggtgg 360
ttctggcggc ggcggtccg gtggtggtgg ttctgaggtg cagctgctcg agcagtctgg 420
agctgagctg gtaaggcctg ggacttcagt gaagatatcc tgcaaggctt ctggatacgc 480
```

```

cttcactaac tactggctag gttgggtaaa gcagaggcct ggacatggac ttgagtggat 540
tgagatatatt ttccctggaa gtggtaatat ccactacaat gagaagttca agggcaaagc 600
cacactgact gcagacaaat cttcgagcac agcctatatg cagctcagta gcctgacatt 660
tgaggactct gctgtctatt tctgtgcaag actgaggaac tgggacgagc ctatggacta 720
ctggggccaa gggaccacgg tcaccgtctc ctccggaggt ggtggctccc aggtgcagct 780
ggtgcagtct gggggaggcg tgggccagcc tgggaggtcc ctgagactct cctgtaagtc 840
ttctggatac accttcacta ggtatacgat gcactgggtc cgccaggctc caggggaagg 900
gctggagtgg attggataca taaatcctag ccgtgggttat actaattata atcagaaggt 960
gaaggaccga ttcaccatct ccagagacaa ctccaagaac acggcctttc tgcaaattga 1020
cagcctgaga cccgaggaca cgggtgtgta tttctgtgcg agatattatg atgatcatta 1080
ctgccttgac tattggggcc agggcacccc ggtcacctgc tcctcagtcg aaggtggaag 1140
tgagggttct ggtggaagtg gaggttcagg tggagtggac gacatccaga tgacccagtc 1200
tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc atcacttgca gagcaagttc 1260
aagcgtaagc tacatgaatt ggtatcagca gacaccaggg aaagccccta agagatggat 1320
ctatgacaca tccaaagtgg cttctggggg cccatcaagg ttcagtggca gtggatctgg 1380
gacagattac actttcacca tcagcagtct gcaacctgaa gatattgcaa cttactactg 1440
tcaacagtgg agtagtaacc ctctcacttt tggccagggg accaagctgc agatcacc 1498

```

<210> 36

<211> 496

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
anti-CD3

<400> 36

```

Glu Leu Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly
1              5              10              15

```

```

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
              20              25              30

```

```

Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln
              35              40              45

```

```

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
              50              55              60

```

```

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65              70              75              80

```

```

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn
              85              90              95

```

```

Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile
              100              105              110

```

Lys	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser
		115					120					125			
Glu	Val	Gln	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Leu	Val	Arg	Pro	Gly
	130					135					140				
Thr	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ala	Phe	Thr	Asn
145					150					155					160
Tyr	Trp	Leu	Gly	Trp	Val	Lys	Gln	Arg	Pro	Gly	His	Gly	Leu	Glu	Trp
				165					170					175	
Ile	Gly	Asp	Ile	Phe	Pro	Gly	Ser	Gly	Asn	Ile	His	Tyr	Asn	Glu	Lys
			180					185					190		
Phe	Lys	Gly	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Ser	Thr	Ala
		195					200					205			
Tyr	Met	Gln	Leu	Ser	Ser	Leu	Thr	Phe	Glu	Asp	Ser	Ala	Val	Tyr	Phe
	210					215					220				
Cys	Ala	Arg	Leu	Arg	Asn	Trp	Asp	Glu	Pro	Met	Asp	Tyr	Trp	Gly	Gln
225					230					235					240
Gly	Thr	Thr	Val	Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gln	Val	Gln
				245					250					255	
Leu	Val	Gln	Ser	Gly	Gly	Gly	Val	Val	Gln	Pro	Gly	Arg	Ser	Leu	Arg
			260					265					270		
Leu	Ser	Cys	Lys	Ser	Ser	Gly	Tyr	Thr	Phe	Thr	Arg	Tyr	Thr	Met	His
		275					280					285			
Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile
	290					295					300				
Asn	Pro	Ser	Arg	Gly	Tyr	Thr	Asn	Tyr	Asn	Gln	Lys	Val	Lys	Asp	Arg
305					310					315					320
Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ala	Phe	Leu	Gln	Met
				325					330					335	
Asp	Ser	Leu	Arg	Pro	Glu	Asp	Thr	Gly	Val	Tyr	Phe	Cys	Ala	Arg	Tyr
			340					345					350		

Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Pro Val
 355 360 365

Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly
 370 375 380

Gly Ser Gly Gly Val Asp Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
 385 390 395 400

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser
 405 410 415

Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala
 420 425 430

Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro
 435 440 445

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile
 450 455 460

Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Trp
 465 470 475 480

Ser Ser Asn Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
 485 490 495

<210> 37

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 37

Leu Glu Trp Ile Gly
 1 5

<210> 38

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 38

Ser Ala Ser Ser Ser Val Ser Tyr Met Asn
1 5 10

<210> 39

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 39

Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 40

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 40

Gln Gln Trp Ser Ser Asn Pro Phe Thr
1 5